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Remarks/Arguments:

Applicant wishes to thank the Examiner for his detailed comments. As Examiner has chosen to group his comments by section, Applicant shall address each of these sections and points in turn.

Claim Rejections:***Claim Rejections - 35 USC § 112***

1. Examiner has stated:

"...Claims 1-7 and 9-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

"Claims 1 and 9 recites "net magnetic moment $dM=0$." However, Applicant has define M as "magnetic magnetization" (?-LG) "in Specification, p. 9, line 1, and it is well known that the magnetization is the value of magnetic moment divided by volume. Therefore, it is not clear that Applicant is to claim the differential of the magnetizations being zero or the net magnetic moment being zero."

Allowable Subject Matter

2. Examiner has stated:

"Claims 1-7 and 9-15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims..."

Response to Arguments

3. Examiner has stated:

"Applicant's arguments filed 10/ 18/2006 have been fully considered but they are not persuasive.

"• Applicant argument is based on Applicant's assumption: "the layers are all trimmed to the dimensions, so the square area of each layer is approximately equal." Thus, assuming layers of same material and equal square area, any variation in magnetization will be due to the thickness of the layer only." However, the feature "layers of same material" is not recited in the claim. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, "layers of same material" is

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not common practice, i.e. there are so many prior art, wherein the layers are made of different materials.

5 “• The magnetization and magnetic moment will have same difference only as having same volume. Usually, two layers in the device may have same area, but the thickness would be different; therefore, difference between the "magnetic moment" and "magnetization" should not be ignored.

10 “• To have the case allowed, the ambiguity of terminology used in the claims should be removed.”

15 In the presently amended claims, Applicant has removed references to “dM=0” and “dT”, which have been found to be confusing by the Examiner. Applicant still maintains that these terms have been defined in the Specification and used consistently. Further, it is thought that those skilled in the art would find no ambiguity in the present claims.

20 However, Applicant has presently removed references to these shorthand terms and replaced them with the precise terminology for which they stand. Thus Claim 1 as presently amended recites:

25 “an in-stack biasing structure having net magnetic moment which is substantially equal to zero, which acts to stabilize said free layer by exchange coupling.”

30 Thus any confusion between magnetization and magnetic moment as claimed should be resolved.

35 Similarly, Claim 3 presently recites:

“net magnetic moment substantially equal to zero corresponds to a difference in thickness of said paired layers of opposite magnetic orientation which is less than 5×10^{-10} meters,”

Thus any ambiguity as to these terms should now be clarified.

As the clarification of these terms was stated to be the last remaining obstacle to allowance, it is thought that Claims 1 and 9 and their dependent claims 2-7 and 10-15 are in condition for complete allowance.

Thus Applicant requests that the rejections be withdrawn and all claims present in the case be allowed.

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Conclusion:

Applicant has endeavored to put this case into complete condition for
5 allowance. It is thought that the present amendments have overcome the rejection
under 35 USC § 112. It is thought that the current amendments have placed all
present claims in condition which has been stated to be allowable either directly or
by dependence. Applicant therefore respectfully asks that the rejections be
withdrawn and that allowance of all claims presently in the case now be granted.

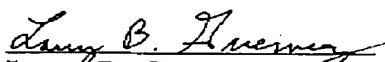
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If the Examiner would like to discuss any of the points involved in the
Response, he is urged to contact Applicant's Attorney at the numbers included
below.

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Respectfully Submitted,


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